

REMARKS

Upon entry of this paper, no additional claims have been amended, no additional claims have been canceled, and no claims have been added as new claims. Thus, claims 1-13 and 15-28 are presently pending in this application. No new matter has been added.

Claim Rejections Under 35 USC § 103

Claims 1-13 and 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Ramaswami et al. Applicants respectfully traverse this rejection in view of the following remarks.

The Examiner has indicated that the “combination of admitted prior art and Ramaswami et al. simply provides 1:1 (1:N) protection as the span protection scheme and shadow span of the admitted prior art.” *See* OA, page 3. The Examiner further indicates that “[i]n view of this combination, claim 1 reads on one case of operation: the failure of the working span between switch 54 and amplifier 60 in Fig. 1C.” *See* OA, page 3. Applicants respectfully submit that claim 1 (or 12, or 24) does not read on the described case of operation, nor on any case of operation that could result from the combination of Fig. 1C with Ramaswami. As such, Applicants submit that the prior art, when combined, fails to teach or suggest all the claimed limitations.

Specifically, the combination of Fig. 1C with Ramaswami can result in the following arrangement of paths, with working indicated as “W” and protect indicated as “P” and shadow spans indicated with a single quote, as follows:

W path carrying C band traffic
W path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)
P path carrying C band traffic
P path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)
W' path carrying C band traffic
W' path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)
P' path carrying C band traffic
P' path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)

The above list of paths indicates the scenario of Fig. 1C in combination with Ramaswami, and in the instance of overflow so that both C and L bands are utilized. It should be noted that if there is no overflow situation, then only the C band would be utilized in the prior art based structure proposed by the Examiner, and this clearly would not be read on by claim 1, which requires use of both sub-bands (the first carried by W path and the second by P path). Thus, assuming the overflow situation, if the working span between switch 54 and amplifier 60 in Fig. 1C were to fail, then the following list of active paths would result:

- W path carrying C band traffic
- W path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)
- P path carrying C band traffic
- P path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)
- P' path carrying C band traffic
- P' path carrying L band traffic (only if C band overflow)(See Spec., p. 7, l. 30-31)

The above arrangement indicates the W path carrying both C and L band traffic, and the P path carrying both C and L band traffic. As viewed in the context of claim 1, this equates to the first sub-band of the optical signal being carried by both the working and protect paths, NOT "only the working path" as required by claim 1. Likewise, the second sub-band of the optical signal is carried by both the working and protect paths, NOT "only the protect path" as required by claim 1.

The present claimed invention (according to all independent claims 1, 12, and 24) splits a first sub-band of the optical signal to be carried "only by the working path" and a second sub-band of the optical signal to be carried "only by the protect path". There is no recognition in either Fig. 1C of the admitted prior art, or in Ramaswami of separation of the optical signal into non-overlapping sub-bands. Furthermore, there is no recognition of then allocating each sub-band to *only operate on one* of a working path or a protect path, but *not on both*. This arrangement is claimed in claim 1 as "a *first sub-band* of the optical signal carried *only* by the *working path . . .*" and "a *second sub-band* of the optical signal carried *only* by the *protect path . . .*" See claim 1, (see also claim 12 "separating the optical signal into a first sub-band supporting only a working path and a second sub-band supporting only a protect path" and claim 24

“amplifying only signals from a first sub-band . . . carried only by a working path; and . . . amplifying only signals from a second sub-band . . . carried only by a protect path”).

Applicant respectfully submits that to establish a *prima facie* case of obviousness there must be some suggestion or motivation, either in the prior art or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine multiple reference teachings. There must then be a reasonable expectation of success. Finally, the prior art reference or references (when combined) must teach or suggest all the claimed limitations. Applicant submits that such a case of obviousness cannot result from the applied art.

Accordingly, Applicant respectfully submits that the combination of Fig. 1C with Ramaswami fails to teach or suggest every characteristic of Applicant’s claims 1, 12, or 24, and their corresponding dependent claims. Applicant further submits that all claims of the present invention are not obvious with respect to, and are therefore allowable over, the cited art.

CONCLUSION

In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance. Applicant courteously solicits allowance of the claims in the form of a Notice of Allowance. Should there be any outstanding issues of patentability following the entry of this response, a telephone interview is respectfully requested to resolve such issues.

Applicant believes no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. SYCS-042 from which the undersigned is authorized to draw.

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Respectfully submitted,

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